

Human CMBL Protein (His Tag)

Catalog Number: 11404-H07E



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

JS-1; 2310016A09Rik

Protein Construction:

A DNA sequence encoding the human CMBL (Q96DG6) (Met 1-Met 245) was expressed, with a N-terminal polyhistidine tag.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human CMBL comprises 260 amino acids and has a calculated molecular mass of 30 kDa. It migrates as an approximately 28 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 0.1% Brij35, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

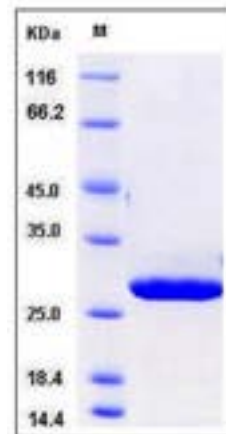
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Carboxymethylenebutenolidase (CMBL), also known as 4-carboxymethylenebut-2-en-4-olide lactonohydrolase, maleylacetate enol-lactonase, dienelactone hydrolase, and carboxymethylene butenolide hydrolase, is a hydrolase specially belonging to the family of hydrolases. It mainly acts on carboxylic ester bonds. CMBL is a human homolog of *Pseudomonas* dienelactone hydrolase involved in the bacterial halocatechol degradation pathway. The ubiquitous expression of human CMBL gene transcript in various tissues was observed. CMBL was demonstrated to be the primary olmesartan medoxomil (OM) bioactivating enzyme in the liver and intestine. The recombinant human CMBL expressed in mammalian cells was clearly shown to activate OM. The recombinant CMBL also converted other prodrugs having the same ester structure as OM, faropenem medoxomil and lenampicillin, to their active metabolites. CMBL exhibited a unique sensitivity to chemical inhibitors, thus, being distinguishable from other known esterases.

References

1. Ishizuka T, et al. (2010) Human Carboxymethylenebutenolidase as a Bioactivating Hydrolase of Olmesartan Medoxomil in Liver and Intestine. *The Journal of Biological Chemistry*. 285: 11892-902.
2. Schmidt E, et al. (1980) Chemical structure and biodegradability of halogenated aromatic compounds. Conversion of chlorinated muconic acids into maleoylacetic acid. *Biochem J*. 192 (1): 339-47.

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